

Comments to FCC Rulemaking Process # 03-104

The use of power lines to carry Internet Services to customers is a bad idea from both the technical and shared resources view.

Before beginning, I must say that I spent 35 years employed by an electric utility working in the distribution operations and engineering areas. I am also a registered Professional Engineer in the State of Minnesota. I do understand the limitation of the power system.

Because of the broad coverage area of the power distribution system, it is constantly exposed to many hazards creating system faults. Outages to the power system can occur due to weather, equipment faults, inadvertent contact by animals or birds, public damage to the system due to accidents, etc. Many faults are self-clearing, that is, power is not interrupted but may persist for several seconds, a lifetime to a fast internet access scheme. Persistent faults may take hours to repair, certainly beyond the limits of tolerable ISP service outages. With higher voltage distribution systems, the number and duration of faults increases due to the broader area of service territory covered.

Second, the increasing use of non-linear devices such as lighting control system, switching power supplies (in all computers), battery charging devices, etc., has caused the 60 Hz power carrier to become even more infected with high speed interference. Certainly, the carrier environment that will be provided to the residential internet user on an ordinary power line will be polluted at best and unusable at worst. The situation only worsens for the average commercial user.

Use of power lines for fast internet access is a bad idea both to users of the service and to users of co-existing services such as broadcasting, commercial two-way radio, etc. The power system is simply not compatible with either the demands of the internet user nor the ability to operate without interference to other lawful users.